Building a Digital Agenda for Brazil and Europe

Porto Alegre, Brazil

May 2011

Author: Elena Scaramuzzi, Cullen International

EUBrasil, a non profit organisation supporting the development of business, political and cultural links between the European Union (EU) and Brazil, organised in September 2010 a seminar in Brussels, at the EU Parliament, on the bilateral relations in the Information and Communications Technology (ICT) sector. The event attracted senior representatives from the EU Commission, the Brazilian Government and industry.

The seminar was an occasion to share the respective ICT goals and strategies in the EU and Brazil, and to reflect on and openly discuss bilateral relations in this field. A number of remarks and proposals were made by industry representatives on how to build on the strong bilateral relations between Brazil and the EU, and how to make ICT cooperation even stronger in the future.

In its continued effort to promote bilateral dialogue on ICT, EUBrasil intends to promote other events in Brazil and Europe, in particular to report the expectations and concerns of Brazilian and European industry to policy makers in Brazil and Europe. EUBrasil is currently working on a policy document for the next EU/Brazil summit on ICTs, in consultation with Brazilian and European industry.

Bilateral dialogue and cooperation on ICT has progressed steadily since September 2010, and very important developments have taken place both in Brazil and in the EU. Since January 2011 there is a new President and a new government in Brazil. At the beginning of their mandate, they both confirmed their high commitment to the national ICT agenda. The Brazilian broadband plan was approved exactly a year ago, as was the EU Digital Agenda, setting the ICT goals for Europe until 2020.

This paper provides an update on the status of the respective ICT policy agendas and summarises the main points of discussion shared between public and private stakeholders involved in the ICT dialogue between Brazil and the EU.

Porto Alegre, May 2011

Table of contents

Annexes

1. European and Brazilian ICTs

With a population of over 193 million, Brazil is one of the fastest growing economies in the world, hitting 7.5% average growth in 2010, the highest over the last 24 years[1]. Demand for electronic communications services is growing steadily (3.5% on average, both in 2009 and in 2010), partly due to the increasing purchasing power of Brazilian households.

At the end of 2010, Brazil surpassed 100% mobile penetration, with over 207 million mobile users in February 2011[2]. Pay TV subscribers reached 10 million, (30.7% annual growth) with satellite at almost the same penetration levels as cable[3]. With 13.8m subscribers at the end of 2010, broadband is among the fastest growing services in the telecommunications market (21.5% growth compared with 2009). Broadband penetration in 2009 was 6.3% of the population, compared with the European average of 24.8%. At the end of 2010, broadband penetration in Brazil reached 7.1% of the population[4].

Europe's electronic communications sector has shown resilience during the economic crisis. Europe's telecommunications market experienced zero growth in 2009 but fared well compared to a 4.2% decline in the overall EU economy. However, the market has reached maturity for both fixed and mobile voice services. Revenue increases for new services, such as fixed and mobile broadband, and triple play bundles including IPTV are not yet able to compensate for the declining trends observed for traditional services.

The European Commission estimates that there are 124m fixed and 25m mobile broadband subscriptions in the EU, with significant variations between regions and member states in terms of the provision and coverage of broadband.

Brazil and Europe are facing different challenges for their respective broadband development. Figure 1 shows the current positioning, in terms of broadband penetration and growth, for a number of developed and emerging countries. Average broadband penetration on fixed networks (number of subscribers for every 100 inhabitants) reached 24.2% in June 2010 in OECD countries. Broadband penetration in OECD countries grew on average from 2007 to 2010 by 10.1%[5].

"A" group - Although still below the OECD penetration levels, Brazil is one of the fastest growing broadband markets in the world, along with several other emerging economies, like Russia, Mexico, Colombia, China, and Argentina. A number of Central and Eastern European countries are also part of this group, as well as Italy, Portugal, and Ireland which however are positioned very close to the OECD average.

"B" group - On the opposite side, on the lower right section of the chart, are the countries which have reached above average broadband penetration. This group includes most Western European countries and other developed economies like Japan, Korea and the US. Growth has slowed down considerably for these countries, where the broadband market has reached maturity.

"C" group - On the top right section of the chart are the few countries, including France, New Zealand and Germany, still showing considerable dynamism and above average broadband growth over the last three years - in spite of the very high penetration already achieved.

---

[1] Source: IBGE. GDP amounted to BRL 3,675 trillion. Per capita GDP was BRL 19,016 (+6.5% from 2009)

[2] Source: Anatel

[3] Source: Anatel. Cable penetration was 49.7%, DTH 47.3% in Feb. 2011. At the end of 2009 DTH market share was 37.9%.

[4] Source: Broadband statistics for Brazil: Telebrasil, EU broadband statistics: EU Commission

[5] Average growth calculated on historic penetration data of wired broadband services, as reported by OCDE as of 2Q 2007, 2Q 2008 and 2Q 2009. See Annex 4 for details

"D" group - On the opposite side (lower left side of the chart) are the countries showing low penetration combined with below-average broadband growth. Austria, Spain and Australia are part of this last group.

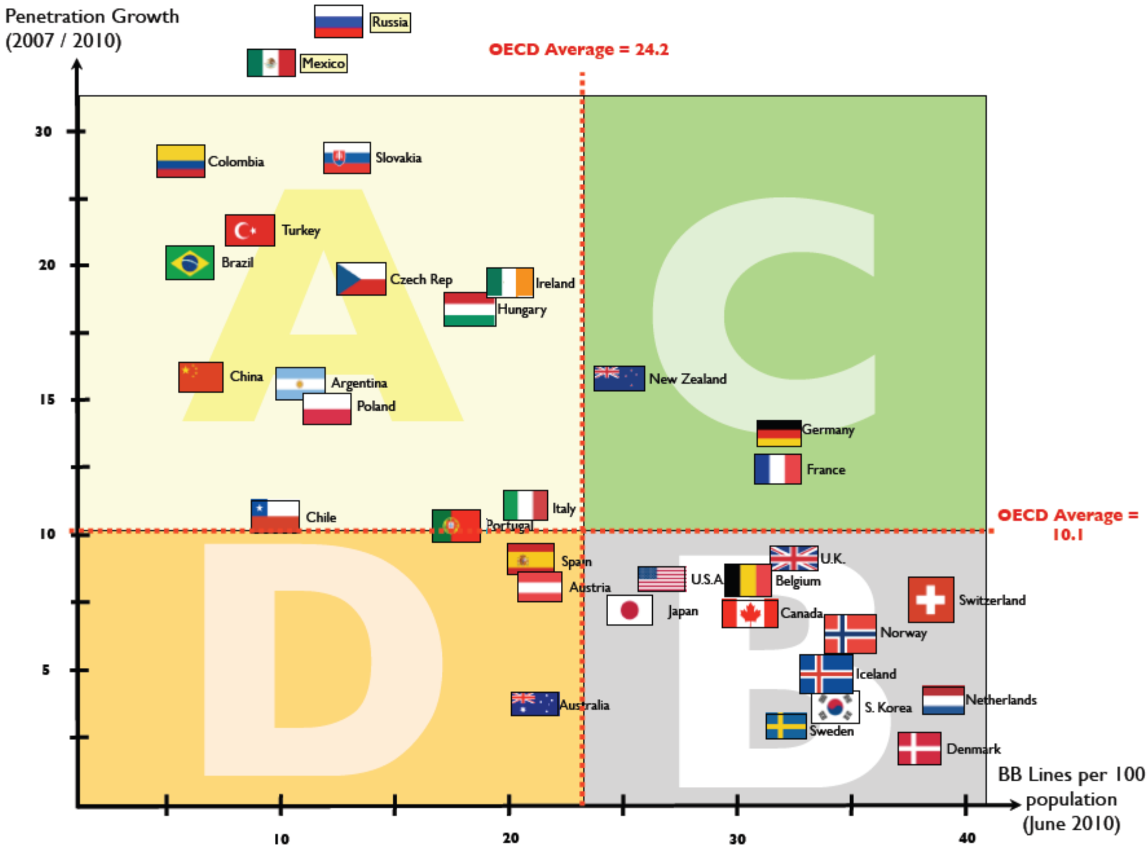

Figure 1 – Broadband penetration and growth in selected countries (Source: Cullen International based on OECD, ITU and national statistics agencies' data[6])

2. Broadband policy targets

Brazil

In May 2010 the Brazilian government launched a national broadband plan (PNBL) aiming to bring basic broadband (512 kbps with download limitations) to approximately 40m Brazilian households by 2014. To achieve these goals, a new structure of affordable broadband prices was established. The table below shows the targets set out in the Brazilian plan.

Year	Broadband households (million)	(% of total households)	Lowest speed	Target retail monthly prices (BRL)
2009	12	21%	<256 kbps	96 to 49 (US$ 56-28)
2014	35.2	61%*	512-784 kbps	35 (US$ 20)
	39.8	69%*	512 kbps (with download limitations)	15 (US$ 8.7) (with government incentives)

* CI estimate

Table 1 - National broadband plan of Brazil

[6] OECD: June 2010. Russia, China, Argentina and Colombia: ITU 2007-2009 data. See Annex 4

In the plan it was also established that three main entities would be involved in the management and implementation of the PNBL, as described in the table below.

National broadband plan	Planning and governance	Operations	Regulatory control
Responsible entity	Digital Inclusion Committee (includes several ministries and the President of Brazil)	Telebrás	Anatel (NRA)
Tasks	• definition of priorities and schedule • promotion of public-private partnerships • technical definition of broadband access • identification of underserved localities • monitoring and evaluation	• management and operation of national fibre backbone • offer of wholesale access services on non-discriminatory terms • retail broadband offer to users in *"underserved areas"* (not defined)	• foster competition, free initiative and broadband offer • stimulate deployment of convergent services • impose sharing of infrastructure • solve disputes • analyse impact of price reductions and public subsidies on competition • manage public resources (incl. frequencies) aiming to reduce costs

Table 2 - National broadband plan: tasks and responsibilities

From the second half of 2010, the former monopolist and state-owned entity, Telebrás, was restructured and started building a national backbone network aiming to reach 4,278 municipalities by 2014.

Following public tender procedures, Telebrás signed a number of contracts for equipment and network systems totalling BRL 201.7m (US$ 117m), as well as agreements with public utility groups, Petrobrás and Electrobrás, on the terms of use of their respective optical fibre infrastructures for the national telecommunications network. The connection of the first 100 cities, initially foreseen by the end of 2010, was postponed to April 2011.

In Brazil, broadband access is currently offered by operators over their own infrastructure. Retail offers vary in terms of price, speed and geographic coverage. Advertised offers for up to 1 Mbps broadband access in large cities are currently between BRL 39.90 (US$23) and 54.90 (US$32) per month, including taxes. Higher speeds are considerably more expensive, with prices ranging from BRL 69.90 (US$41) to BRL 129.90 (US$75) for 10 Mbps access.

Very high speed offers are also available. 50 Mbps broadband access is currently offered from BRL 299.90 (US$ 174) to BRL 439.90 (US$255) per month by the two fixed incumbents in the respective regions. Telefonica offers 100 Mbps fibre broadband access from BRL 229.90 (US$134) to BRL 399.80 (US$232) per month. Telefonica's fibre network in the São Paulo region currently covers 400,000 accesses, or 3.2% of households. The company recently announced FTTH network deployments reaching 1 million households in São Paulo by 2015.

Europe

The European Commission has set broadband targets for Europe to be achieved by 2020. By then all Europeans should have access to the internet at speeds above 30 Mbps, and 50% of European households should have a subscription above 100 Mbps.

Achieving these goals - which are however not binding on member states - will require substantial investment. The Commission estimates that some €60bn will be required to achieve the target of 30 Mbps for all Europeans by 2020, rising to €180bn - €250bn to achieve the target of 100 Mbps subscriptions for 50% of European households by 2020.

Several member states have also set national goals for broadband development, often differentiating between traditional (see Figure 2) and next generation access (NGA) broadband (see Figure 3). Most countries have set such targets as policy goals. Finland and Spain have included 1 Mbps broadband under the scope of universal service.

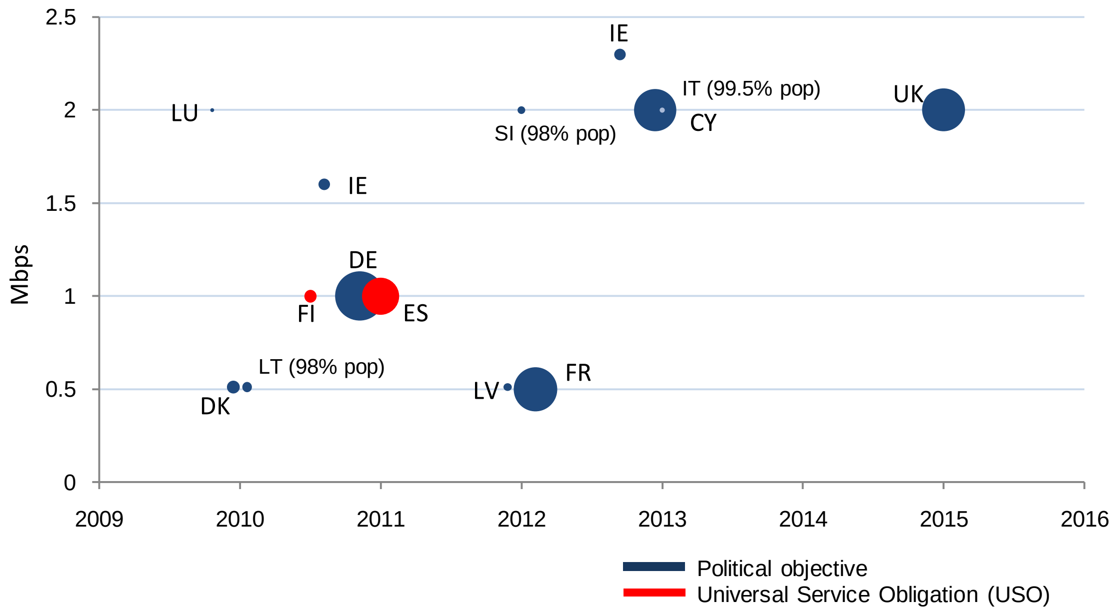

Figure 2 - National targets for basic broadband covering 100% of population (source: Cullen International)

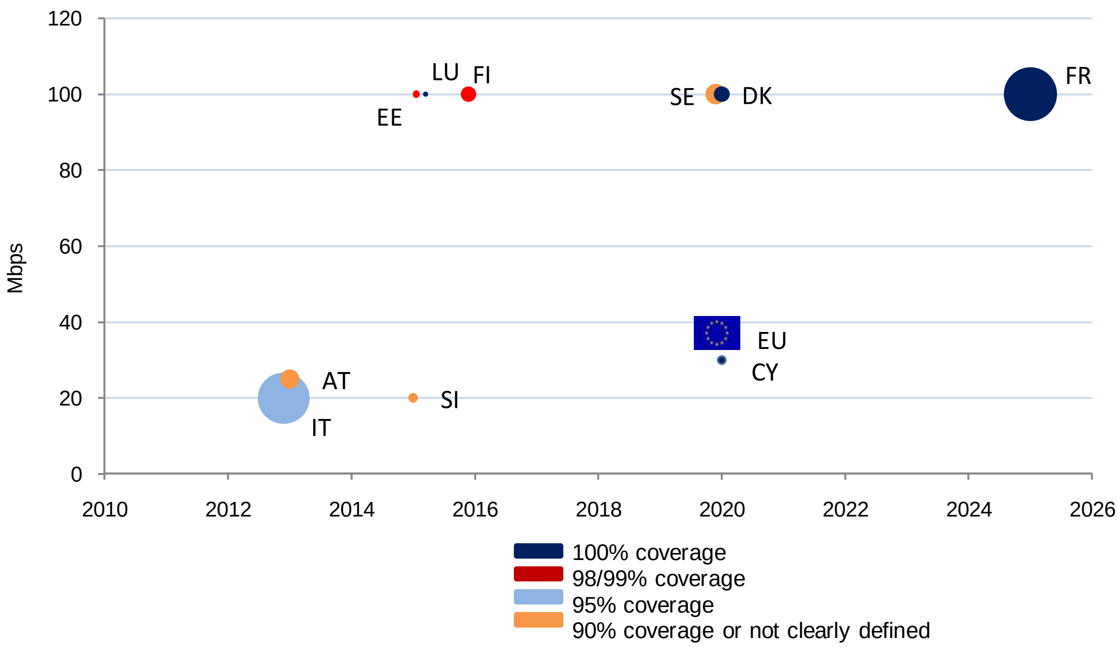

Figure 3 - National targets for fast broadband covering at least 90% of population (source: Cullen International)

In Europe, broadband is expected to be deployed by the private sector, with public funding being the exception rather than the rule. Public funds are generally channelled to rural and remote areas where operators do not have sufficient commercial incentives to provide broadband services. This approach is due to a general prohibition of state aid under EU rules, as aid can distort competition and the functioning of the EU internal market.

Any funding from the state must be authorised. In September 2009, the European Commission adopted community guidelines for the assessment of the compatibility of state aid for both traditional broadband and NGA network deployments.

According to statistics published by the European Commission, average broadband penetration in the EU has increased from January 2004 to January 2010, from 4.9% to 24.8%.[7] Broadband take-up has been fostered by falling prices and higher speed offers, thanks to increased competitive pressure.

From 2007 to 2009, median prices for 2-4 Mbps offers decreased by 86%, from €49.63 to €26.65, and for 4-8 Mbps offers decreased by 53%, from €51.33 to €33.61. Fierce competition for very high speed bundles also drove retail prices down. Prices for broadband access above 30 Mbps decreased in three years by 73%, from €71.53 to €41.43[8].

3. Broadband regulation

Brazil and Europe have followed different approaches to privatization and liberalisation. Over the last decade, Brazil has focused much of its regulatory effort to stimulate investment in infrastructure expansion and service take-up in all regions of Brazil. Universal service and price caps have been essential to achieve expansion and affordability for an emerging Brazilian telecommunications sector.

Restrictions on telecommunications operators offering triple-play services on fixed networks are today considered one of the main problems in the Brazilian regulatory environment. The Brazilian regulator, Anatel, is expected to adopt a competition plan in 2011. The plan will include competition targets and a number of regulatory measures aimed at achieving more competition in specific telecommunications markets. It is still uncertain whether a number of wholesale access obligations and other regulatory measures will be introduced to foster competition in the broadband market. Until today, no regulated wholesale access products, such as local loop unbundling or bitstream access, have been mandated in Brazil.

Europe, on the other hand, has put forward a specific approach to competition, with asymmetrical regulatory obligations imposed - when required - on dominant operators in relevant telecommunications markets. A great number and variety of regulated access products are available in the fixed network markets of most EU member states, usually along with other pro-competitive measures like non discrimination, cost oriented pricing and publication of reference offers. The principle of technology neutrality has also been beneficial for the development of convergent services.

In September 2010, the European Commission adopted a recommendation on NGA. The recommendation aims to promote a consistent approach to regulated access to NGA networks, with rules to be imposed by national regulators on operators designated as having significant market power in the wholesale (physical) network infrastructure access market at a fixed location and the wholesale broadband access market. Although not binding, member states must take the recommendation into the utmost account.

The recommendation seeks to avoid distortions of the single European market and to provide legal certainty to operators investing in NGA networks. The recommendation indicates the types of obligations which should be considered by regulators when regulating the broadband access markets.

---

[7] European Commission Progress Report on the Single European Electronic Communications Market (15th Report, May 2010)

[8] European Commission 15th Rerport, based on price data from Van Dijk Management consultants

It also provides for more flexible pricing rules, taking into account the need to compensate operators for the higher risks related to NGA investment.

National regulatory authorities in the EU have been increasingly addressing the new regulatory challenges related to NGA deployments over the last few years. New investment models, including co-investment and public-private partnerships for NGA deployments, have also started to appear in several member states.

4. Cooperation in research and development

Brazil and the EU have successfully cooperated in ICT research and development projects for over 10 years. The success of this cooperation was demonstrated by the launch, in September 2010, of a coordinated €10m call for proposal on research and development projects in ICT within the 7th Research Framework Programme. Building on the 2006 Science & Technology Cooperation Agreement and on the 2007 Strategic Partnership, this new initiative sets an important milestone in research cooperation between the EU and Brazil.

Brazil and the EU will support bilateral R&D projects in key technological areas, including Internet experimental facilities and security, microelectronics and micro-systems, networked monitoring and control, and e-Infrastructures. Joint research and development efforts will be directed, for instance, to promoting responsible energy consumption, transport, energy generation and manufacturing.

Both partners have also agreed to work together to strengthen trans-Atlantic broadband connections between the EU and Latin America, particularly for scientific and technological cooperation.

5. The private sector's perspective

The first EUBrasil seminar on the ICT dialogue, held in Brussels in September 2010, was an occasion for the private sector to present its views, as well as to express appreciation or concerns on the policies respectively carried out in Brazil and the EU. As can be expected, the views presented at the seminar were rather diversified, often in light of market players' different positions in the Brazilian market[9]. Many industry representatives expressed an interest to be more involved in the bilateral cooperation between Brazil and Europe, presenting proposals on how the private sector could proactively contribute to this dialogue.

- **ICT trade and production**

In spite of an improvement during the last year, the number of counterfeit mobile phones is rapidly increasing in Latin America and Brazil. An even bigger challenge is emerging in Latin America in terms of substandard phones.

Concerns were also raised by the European ICT industry on recent industry policies to promote national industry and technology. On the production side, it was remarked that both Europe and Brazil should agree on concrete steps to make the IT sector an enabler of long term sustainable growth in the respective economies. Cloud Computing could play a very important role in this respect.

ICT should also be an enabler of responsible energy consumption in all sectors of society. Smart meters, efficient lighting, cloud computing and distributed software can transform energy usage patterns.

[9] See EUBrasil Follow-up Report

- **Internet and copyright legislations**

According to industry, there are potential synergies between Brazil and Europe in this field, in particular to build bridges for the successful settlement of legal frameworks and for cooperation in the development of public policy tools, including incentives encouraging the use of legal offers that do not infringe copyright laws.

Additionally, Brazil and Europe should agree on clear and consistent regulatory frameworks on safe harbour for Internet intermediaries, and address potential harm through the application of regulatory obligations in the field of privacy and data protection. Regulation should allow innovation and freedom to define business models.

Both Europe and Brazil should promote greater legal clarity concerning claims for access to communication data. More legal certainty on data retention would also be a goal to pursue in the future.

- **Spectrum for mobile broadband**

Mobile broadband offers great opportunities both in Brazil and in the EU. Economies of scale, global standards and spectrum allocation are key success factors.

Brazil's recent decision to allocate the 2.6 GHz band paves the way to increased mobile broadband capacity. To maximise the benefits of the digital economy, it will be essential to address the coverage aspects of mobile broadband, and to pursue the early allocation of the digital dividend spectrum to foster mobile broadband services.

- **Entry and business conditions in the respective markets**

The Brazilian market reacts quickly to innovation, but more may be done to facilitate competition and market entry, for example, eliminating the regulatory restrictions on triple play offers.

Another important intervention should be in terms of the reduction of the fiscal complexities in Brazil. Some investors question the relative roles of the public and private sector in the broadband debate, highlighting that public participation in the supply of services should be an exception rather than the rule.

Industry suggested a number of fields where bilateral cooperation opportunities between Brazil and the EU should be explored, for instance on the experiences and approaches for the rollout of NGA, approaches on e-inclusion in rural areas, cross-ownership of companies in Brazil and the EU, joint exports and investment in other geographic areas, joint development of content and applications, and training programs.

6. Dialogue on ICT: the way forward

In spite of the different paths and regulatory approaches followed in the past, **the policy and regulatory dialogue between Brazil and Europe has considerably intensified during the last few years**. Both Europe and Brazil have learned important lessons, and the sharing of experience and information on matters regarding market entry, broadband investment, convergence, and the protection of consumers has been beneficial on both sides.

The policy debate in the EU has been focusing on how to achieve the goals set forth in the EU Digital Agenda, in particular bridging the digital divide by 2013 and stimulating extensive NGA network deployments. In recent years, considerable discussion has been dedicated to the finalisation of the NGA recommendation, and now on its actual implementation across member states. Another important current debate is on the creation of new funding mechanisms to support NGA deployments.

The debate in Brazil, considerably catalysed by the national broadband plan in 2009 and 2010, has recently shifted towards a number of **regulatory dossiers strongly related to broadband, notably the universal service plan and competition plan**, both expected to be adopted by Anatel in 2011.

In terms of policy debate there are a number of issues still deserving attention and which might be considered for future bilateral debate – in particular taking into account the several expectations raised by industry:

1. **how the competitive and regulatory environments will evolve, in practice, in Brazil as well as the EU, with growing investments in NGA**

2. **how private investment and public sector intervention will co-exist in the broadband network environment: public private partnerships and new funding instruments;**

3. **new competitive trends related to NGA deployments: sharing of information on best practices related to new co-investment models; and**

4. **main obstacles still hampering ICT investment in the respective regions: how bilateral dialogue could improve the situation.**

ANNEX 1

Overview of Brazilian and EU and communications

		Brazil	EU-27
Telecom market profile and statistics[10] (Dec. 2009)	**Population**	193m	497m
	Households	58.6m (85% urban)[11]	208m
	Telecommunications revenues	BRL 184.9bn (US$107.5bn)[12], or 5% of GDP	€351bn (US$463.3bn)[13], or 2.8% of GDP (2008)
	Growth	4.2% (average, 2010)	0% (average, 2009)
	Fixed teledensity (lines/100 population)	21.7%	40% (Highest rates in France, Germany, Greece and the United Kingdom, with over 50%; between 20 and 30% in most Eastern European countries[14])
	Mobile penetration	104.7% (82% pre-paid) Subscribers' growth in 2010: 15.7%	122% (55% pre-paid)
	Broadband penetration (users/100 population)	7.1% (23.5% of households) xDSL: 65% of connections Subscribers' growth in 2010: 21.3%	24.8% (60% of households) Highest rates are in Denmark and the Netherlands with 38% and lowest in Bulgaria and Romania with 13% xDSL: 79% of connections
	Broadband speed	above 2 Mbps: 20%	above 2 Mbps: 85%
	Broadband prices (incl. VAT)	Depending on providers and regions, current process charged by incumbent operators are the following: 2-4 Mbps: BRL 49.90-79.90 (US$ 29.0-46.5) 4-8 Mbps: BRL 59.90-99.90 (US$ 34.8-58.1)	Median EU prices (2009): 2-4 Mbps: €26.7 (US$35.2) 4-8 Mbps: €33.6 (US$44.3)

10 Unless otherwise specified, 2009 data. Data sources for Brazil are from Telebrasil's report "O desempenho do setor das telecomunicações no Brasil, series temporais 2010" (March 2011); EU-27 statistics are from the European Commission's 15th Progress report on the single electronic communications market

11 Source: Source: IBGE

12 US$ 1= BRL 1.72

13 €1= US$1.32

14 Source: ITU, 2010

ANNEX 2

Competitive environment

Subject	Brazil	EU-27
Liberalisation	Full competition introduced in Jan. 2002	Full competition introduced in Jan. 1998
Market players (fixed)	Regional incumbents' market shares remain high but have decreased since 2005, when their market shares were above 95%. • Telemar 81% (region 1) • Brasil Telecom 74.5% (region 2) • Telefónica has 74% (region 3) Following the merger of Telemar and Brasil Telecom, the Oi group today holds about 50% of Brazilian accesses. Main competitors are Embratel (long distance concession holder, also offering local services. It is owned by America Móvil) and GVT (owned by Vivendi). Alternative operators use own infrastructure to offer their retail services.	Since 2003 the market shares of the incumbent operators in the fixed retail markets have declined. Incumbents' voice call revenues were 63% in 2008, from 69% in 2004. Incumbents' market shares in the retail broadband market are on average 45%. Incumbents in most member states retain high market shares in terms of direct access (76%). Local loop unbundling (LLU) continues to grow (73.7% of new entrants DSL lines). LLU is used by new entrants to offer triple play services including IPTV. Other wholesale options, including wholesale line rental and bitstream access, are also offered in most member states.
Market players (mobile)	Four national players. Market shares in terms of subscribers: Vivo (30.2%), Claro (25.4%), TIM (24%), and Oi (19.9%). Brazil has 207m active sim cards.	In each member state at least three operators. Four players in UK, Germany, Italy and Spain. Vodafone, Orange, O2 and T-Mobile hold mobile licences in several member states.
Spectrum	Spectrum allocation and licensing are managed by the national regulator Anatel. For licensing purposes Brazil is divided into sub-national service areas. August 2010 decision by Anatel on refarming of 2.5 GHz spectrum (mobile services and multimedia communications).	Spectrum allocation and licensing competences lie with EU member states. • European Commission's Radio Spectrum Policy Programme (proposal - Sep. 2010): member states to make available the 800 MHz band for wireless broadband by 2013 (proposal). Once adopted (European Parliament and Council decision) it will be binding on member states. • European Commission rules imposed a deadline of May 9, 2010 for EU Member States to open up the 900 MHz and 1800 MHz bands for UMTS (3G) and other more advanced technologies (4G) that can coexist with GSM. However, only four member states, namely Denmark, Finland, France and Germany, met the deadline for both frequency bands.

ANNEX 3

Broadband policies and objectives

<table>
<tr><th>Subject</th><th>Brazil</th><th colspan="3">EU-27</th></tr>
<tr><td>Broadband policies</td><td>Brazilian government launched the national broadband plan (PNBL) in May 2010.</td><td colspan="3">• Europe 2020 communication (March 2010)
• Digital Agenda (May 2010)
• Broadband Communication (Sep. 2010)
• Radio Spectrum Policy Programme (proposal - Sep. 2010)</td></tr>
<tr><td rowspan="4">Targets</td><td rowspan="4">By 2014:
• Broadband (lowest speed: 512-784 kbps to 35m households (~60% of households))
• Basic broadband (lowest speed: 512 kbps with download limitations to 39.8m households (~70% of households))
• Affordable monthly prices: US$20 incl. VAT (512-784 kbps) and US$8 (basic offer with incentives, at 512 kbps)</td><td></td><td>2013</td><td>2020</td></tr>
<tr><td>EU 2020 and Digital Agenda</td><td rowspan="2">Basic broadband (speed not defined) for all Europeans</td><td rowspan="2">• 30 Mbps or above for all Europeans
• 100 Mbps or above for 50% or more of European households</td></tr>
<tr><td>BB Communication</td></tr>
<tr><td>Radio Spectrum Policy Programme</td><td>Member states to make available the 800 MHz band for wireless broadband</td><td>EU citizens to have access to at least 30 Mbps wireless broadband</td></tr>
<tr><td>Implementation</td><td>Detailed actions and priorities within the plan to be set by the Digital Inclusion Committee (includes several ministries and the presidency of Brazil).
Telebrás will play a fundamental role in the national broadband plan´s implementation.
• management and operation of national fibre backbone
• offer of wholesale access services on non discriminatory terms and conditions
• retail broadband offer to users in “underserved areas” (further undefined)</td><td colspan="3">The targets of the EU 2020 and Digital Agenda are not binding on member states. Once adopted under a European Parliament and Council decision, the RSPP will be binding.
Member states are responsible of implementing broadband policies at national level.
Several member states have also adopted national broadband policies, with broadband included within the scope of universal service.
It has been estimated that the total investment until 2020 required for the implementation of the objectives set out in the Digital Agenda will be:
• 30 Mbps or above for all Europeans: €60bn
• 100 Mbps or above for 50% or more of European households: between €180bn and €270bn</td></tr>
<tr><td>Public funding involved</td><td>Proposed funding:
• BRL 3.22bn (US$1.9bn) for recapitalization of Telebrás
• BRL 1.75bn (US$1bn) for research and development (National Fund for Technology Development - FUNTTEL managed by the Ministry of Communications)
• BRL 785m (US$456m) in tax incentives
• BRL 7.5bn (US$4.4bn) in credit facilities through the state owned National Development Bank</td><td colspan="3">As a general rule, there is a prohibition of state aid in the EU (legal basis: Treaty on the Functioning of the EU).
The European Commission has issued guidelines providing the criteria for the assessment of the compatibility of state aid for both traditional broadband and next generation access (NGA) deployments.</td></tr>
</table>

Annex 4

OECD Broadband statistics [oecd.org/sti/ict/broadband]

1g. OECD historical fixed (wired) broadband penetration rates (June 2010)

	fixed BB penetration 2010-Q2	BB penetration growth (2007-2010)	
Australia	23.44	3.21%	D
Austria	22.91	8.23%	D
Belgium	29.94	8.03%	B
Canada	30.07	6.96%	B
Chile	10.17	10.36%	A
Czech Republic	13.73	18.63%	A
Denmark	36.69	2.66%	B
Finland	26.35	-1.85%	B
France	31.41	11.98%	C
Germany	31.20	14.09%	C
Greece	18.71	39.95%	A
Hungary	18.66	17.77%	A
Iceland	33.28	4.48%	B
Ireland	20.32	17.81%	A
Italy	21.32	10.52%	A
Japan	26.11	7.12%	B
Korea	34.43	4.82%	B
Luxembourg	34.02	15.97%	C
Mexico	10.01	44.93%	A
Netherlands	37.79	4.13%	B
New Zealand	24.49	16.33%	C
Norway	34.18	4.93%	B
Poland	11.87	14.83%	A
Portugal	18.91	10.15%	A
Slovak Republic	11.99	28.24%	A
Spain	22.19	9.54%	D
Sweden	31.66	3.44%	B
Switzerland	36.72	7.05%	B
Turkey	9.40	23.23%	A
United Kingdom	30.48	8.81%	B
United States	26.86	8.22%	B
OECD average	**24.2**	**10.13%**	
Non-OECD:			
Brazil	7.10	21.33%	A
China	7.70	15.76%	A
Colombia	5.60	27.36%	A
Argentina	11.20	19.94%	A
Russia	12.80	56.51%	A

Note: See the OECD broadband portal for data on sources and estimations

Figure 1 - SWOT chart areas

A	C
D	B

ABOUT CULLEN INTERNATIONAL

Cullen International provides a unique range of regulatory monitoring services on telecommunications, media and electronic commerce, covering the European Union, more than 30 European countries and 10 Latin American countries.

The **regulatory service on Latin America Telecom** provides:

- a tool for monitoring, analysing and benchmarking regulatory developments affecting of Argentina, Brazil, Chile, Colombia and Mexico;
- an overview of the regulatory, competition and consumer protection frameworks in these five countries plus Costa Rica, Ecuador, Peru, Uruguay and Venezuela; and
- access to a unique enquiry services allowing clients to obtain comprehensive answers to specific regulatory questions at no extra cost.

Cullen International services are particularly valuable for clients because it provides:

- **high-quality, up-to-date and timely information;**
- **neutral and independent analysis;**
- **benchmarking of national regulatory situations and practices;**
- **online well-structured reference system, including for primary sources; and**
- **research tailored to clients' individual needs.**

The services have been provided since 1986 and are designed to help companies and organisations with a strategic interest in telecommunications, media and electronic commerce to know and understand regulatory and policy developments that affect their activities and interests.

By providing a solid, reliable and continuously updated information base, services also help clients better organise their internal alert, regulatory-compliance and strategic development activities and to develop effective lobbying strategies.

Cullen International's clients include major telecommunications operators, equipment manufacturers, IT companies, online service providers, regulatory authorities and national governments.

Cullen International maintains strict independence and does not represent the views of any of its clients.For more information about the Latin America Telecom service, go to:

www.cullen-international.com/latinamerica

Or contact: Ezequiel Dominguez: ezequiel.dominguez@cullen-international.com
Elena Scaramuzzi: elena.scaramuzzi@cullen-international.com

Cullen International s.a.
Rue Saint Jean, 6
B-5000 Namur, Belgium

Clos Lucien Outers 11-21/1
B-1160 Brussels, Belgium

EUBrasil is a non-profit-making association created with the aim of supporting the development of **fruitful business, political and cultural links between the European Union and Brazil.**

Major EUBrasil Objectives:

- To promote strong and harmonious bilateral dialogue between economic and political actors of Brazil and EU.
- To seek out solutions for the structural obstacles inherent to the relations between the EU and Brazil.
- To promote the economic, cultural and social cooperation.
- To support the governmental initiatives having as scope the creation of a free exchange trade zone between the EU and Mercosur.
- To develop a political communication that allows to realize the Brazilian interests in the EU and vice versa.

Major EUBrasil Activities:

- To create the **EUBrasil Business Round Table** around which top political and economic actors, European and Brazilian, could meet themselves and discuss.
- To analyze the evolution of the **bilateral dialogue** and to propose new measures of cooperation between the two communities during the official meetings.
- To create a strong **net of associations of professionals and experts**, European and Brazilian, concerned or interested in promoting the cooperation.
- To promote **common plans** in order to benefit of the European cooperation initiatives and particularly of those regarding the research and the development.

EUBrasil sets out to **enhance bilateral dialogue** between the two partners by among other measures establishing a ***communication forum*** bringing together all the interested stakeholders promoting ***bilateral meetings*** and cooperation initiatives at multi-levels.

Membership of EUBrasil is open to:

- Parliamentarians and elected officials
- European and Brazilian companies
- Experts, Academics and journalists.

EUBrasil Association Internationale Sans But Lucratif (AISBL)
Rue de la Loi, 227 - B-1040 Bruxelles BELGIQUE
Tel: + 32 2 613 28 28 Fax: + 32 2 613 28 49
presidencia@eubrasil.eu